

ABSTRACT

A grating light valve is provided with a plurality of spaced reflective ribbons, spatially arranged over a semiconductor substrate, the ribbons and substrate being provided with reflective surfaces. The grating light valve is configured to optimize the conditions for constructive and destructive interference with an incident light source having a given wavelength. In a preferred embodiment, one set of ribbons is moveable with respect to the substrate and the second set of ribbons. The substrate is typically provided with a protective layer, which may be thermally grown silicon dioxide or other dielectric. A conductive trace is provided on the dielectric layer and grounded through the dielectric layer to the substrate, comprising a conductive trace for easy release of charge otherwise trapped in the dielectric layer.